

XX. *On some Oriental Scolytidæ of economic importance, with Descriptions of five new Species.* By WALTER F. H. BLANDFORD, M.A., F.Z.S.

[Read November 2nd, 1898.]

FROM time to time I have received for determination small consignments of Asiatic Scolytids, sent as being injurious to, or more generally associated with a diseased condition of, trees, &c., of economic value.

Such material is usually difficult to deal with. Too often such a consignment contains but a few specimens, among which may be examples of species, either new or of a most obscure character. Rarely does one receive a good series of specimens in proper preservation.

To discuss each sending separately is merely to multiply short papers and single descriptions, unfortunately all too common in economic entomology. In this paper I propose to deal with an accumulation of such consignments which have been in my hands for some time. The source of each, and the particulars furnished therewith, are first given, and the specimens sent are identified so far as possible. The species which I regard as new are afterwards described.

N.W. PROVINCES. "In bark of dead *Pinus excelsa*—Jaunsar and Deoban" (*Ind. Mus.*).

The specimens sent with the above note belong to the genera *Polygraphus* and *Pityogenes*. I am uncertain whether one or two species of *Polygraphus* are represented; as no Oriental species of the genus has been described, the form or forms sent are likely to be new. All the species are so closely allied, that it is useless to attempt any determination without an exhaustive study of good series of all available forms. The single example of *Pityogenes* is an example of a black species allied to *P. chalcographus* and unknown to me; it is not *P. scitus*, Blandf. The material is, however, insufficient for a description.

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E. HIMALAYAS. "Taken from stem of a young India-rubber twig, *Ficus elastica*—Tieta Valley, 1,100 ft., 30th July, 1897" (*E. P. Stebbing*).

One new species, described under the name *Diamerus fiei*.

CHITTAGONG. "Destructive to Mahogany-trees in the Chittagong Hill Tracts" (*Ind. Mus.*).

Monsieur P. Lesne, of the Paris Museum, has forwarded me examples of two species received by him among Bostrychidæ from the Indian Museum, Calcutta, with the above description of their habits. They belong to two very interesting new forms, described under the names of *Scolytoplatypus brahma* and *Xyleborus gravidus*.

CEYLON. The following specimens have been forwarded to me by Mr. E. Ernest Green:—

(a). "Species injurious to ebony seed."

Numerous examples, which I am inclined to refer to *Coccotrypes integer*, Eichh., originally described from Siam. I have not seen the type, but have made a comparison of the specimens with a typical example of *C. pygmaeus*, Eichh., which Eichhoff very carefully differentiates from *C. integer*. The habit of seed-boring is common to the genus, and *C. daetyliperda* constantly attracts notice in the East as a date-borer.

(b). Species supposed to cause disease to Cocoa-trees (*Theobroma cacao*). Mr. Green writes of these:—"Stems of the diseased trees were submitted to me, and I found the enclosed specimens either in the rotting bark or in the wood itself. It was the smallest species, with smooth elytra, that seemed to tunnel deepest. But I gave it as my opinion that the beetles were not the cause of the disease, but were attracted by the altered sap and dying wood. I thought the real cause was either some fungoid disease or unsuitable soil. The whole sap of the tree was altered and turned sour, whereas the tunnels of the beetles were very small and widely separated."

Examples of four species were received: (1) a *Crossotarsus*, which I take to be *C. saundersi*, Chap., although it differs slightly from the type in the direction of *C. fairmairei*, Chap.—probably both forms are races of one and the same species; (2) *Xyleborus semigranosus*, Blandf., previously described by me (*Trans. Ent. Soc. Lond.*, 1896, p. 211) from the refuse of imported Sumatra tobacco;

(3) *Xyleborus fornicatus*, Eichhl., recorded by me (*loc. cit.*, p. 214) as injurious to the tea-plant in Ceylon, and again referred to below; (4) *Eccoptopterus sex-spinosus*, Motsch., previously recorded as injurious to the rice-plant in Burma.

I imagine that *X. fornicatus* is the "smallest species, with smooth elytra."

(c). Further examples from Cocoa-trees. Mr. Green writes: "I was of opinion that the beetles [consignment *b*] were not primarily responsible for the injury, and this opinion has been corroborated by the discovery of a fungus in all the diseased specimens of bark submitted to Kew.

"I am now forwarding two more species of Scolytid beetles that are found in the younger *branches* of the Cocoa-tree, which really are injurious to the plant. They form their tunnels in what appears to be healthy wood and rapidly cause the death of the parts attacked. A dark chocolate or purplish stain spreads through the tissues of the wood surrounding the galleries of the insect."

The two species are both new, and are described under the names of *Xyleborus mancus* and *X. discolor*.

PENANG. "Species injurious to Nutmeg-trees."

Mr. C. O. Waterhouse has received and has communicated to me examples of three species. The majority belong to *Phlæosinus cribratus*, Blandf. (*Trans. Ent. Soc. Lond.*, 1896, p. 198), first described from the refuse of Sumatra tobacco; they vary considerably in length (2·3-4 millim.), but not otherwise except that in some, presumably males, the apices of the 1st and 3rd elytral interstices are not tuberculate.

Besides these, there is an individual which appears to belong to a distinct species of *Phlæosinus*, and is left undetermined; there are also examples of *Xyleborus fornicatus*.

Descriptions follow of the species, five in number, sent in these various consignments, which appear to be new and recognisable.

*Scolytoplatypus brahma*, sp. n.

♀. *S. mikado* ♀, Blandf., forma adeo similis, elytris tamen proportione brevioribus prothorace solum tertia parte superantibus.

Opaca, densissime minute reticulata, nigro-picea, fronte supra os, elytrorum apice, pedibus, ventro plus minusve dilutioribus; prothoracis disco conferte strigoso-punctato, poro medio oblongo; elytris obsoletissime substriatis, punctis omnino nullis, interstitiis 1°, 3°, 5° in declivitate minute tuberculatis. Long. 3 millim.

*Fem.* Similar in form to *S. mikado* ♀, but with the elytra relatively shorter, not more than one-third longer than the prothorax. Blackish-pitchy, dull, entirely covered with fine and extremely dense alutaceous reticulation. Front minutely punctate, with a transverse subnitid impression over the mouth, the space between it and the black epistoma brown-testaceous; antennæ brown-testaceous, the club infuscate, obovate-acuminate. Prothorax with the lateral and hind angles prominent and acute, median pore not large, oblong, surface with very close confluent longitudinal strigose punctures, not deep. Elytra scarcely bisinuate at the base, lighter along the suture and at the apex, closely shagreened, with traces of striæ, the punctures of which are not discernible, interstices from behind the middle with a faint median raised line, the 1st, 3rd, and 5th on the declivity with a series of minute tubercles; declivity convex, with short erect yellowish pubescence. Underside piceous, lighter in places, with coarse shallow punctuation; anterior legs piceo-ferruginous, the middle and posterior legs brown-testaceous.

*Hab.* INDIA, Chittagong Hills.

While the sculpture is most like that of *S. eutomoides*, Blandf., it is quite peculiar. That of the elytra, though very weak, is complex in character, and is consequently difficult to describe adequately. The species belongs to my subgenus *Teniocerus*.

*Diamernus fici*, sp. n.

Oblongus, niger, opacus, capite subnitido, dense punctato, prothorace antice constricto, conferte punctato; elytris post basin prothorace adeo latoribus, ad apicem laud productis, crenato-striatis, interstitiis subconvexis, sat subtiliter multipunctatis et brevissime setosis. Long. 5.5 millim.

Oblong, black, subopaque, the antennæ and tarsi piceous brown. Head slightly shining, closely but not very strongly punctate, and furnished with very short accumbent grey pubescence, front impressed between the antennal foveæ, convex above and with a slight median nodular elevation, somewhat more shining; eyes oblong-oval; antennal club flattened, obovate, somewhat blunt at apex, very closely pubescent, with a strongly angulate suture towards the base. Prothorax not strongly transverse, constricted anteriorly, the

sides rounded, lateral margins distinct but not prominent from the base to the middle, dorsum convex, with very close but not coarse punctuation, and a subcarinate median line from the base to the middle, base impressed for the elytra. Scutellum indistinguishable. Elytra twice as long as the prothorax, separately and strongly rounded at base with narrow raised crenate margins carried back obliquely and sinuate at the sides over the metasternum, the sides sinuate but subparallel, obliquely inflexed at the apex, which forms an angle at the suture but is not produced; surface with moderately deep incised shining crenate striæ, the interstices subconvex, with close and rather fine punctures bearing very short and inconspicuous setæ. Underside strongly punctured, and pubescent with short grey hairs. Legs robust, the anterior tibiæ widened apically, their upper border crenate, the upper apical angle with a backwardly-directed tooth; middle and posterior tibiæ with the upper border rounded and crenate.

*Hab.* E. HIMALAYAS, Tieta Valley, 1,100 ft. (*E. P. Stebbing*).

The species has all the appearance of a *Hylesinus*, from which the structure of the antennal club separates it. Compared with *D. curvifer*, Walk., the nearest allied species known to me, it differs in the absence of the complete opacity characteristic of that species, in the much closer thoracic punctuation, less deeply incised elytral striæ and more convex interstices, as well as in the non-mucronate elytral apex. Assuming the species to be correctly assigned to *Diamerus*, and I do not see any reason for separating it, one must infer that *Diamerus* and *Hylesinus* are somewhat nearly allied to each other.

*Xyleborus gravidus*, sp. n.

♀. Curta, robusta, rufo-testacea, elytris præcipue versus apicem ferrugineis, fulvo-pilosa; prothorace amplo, subgloboso, lateribus leniter apice fortius rotundatis, hoc medio tuberculis 2 fortibus ornato, disco posterius sat dense, in medio indistinctius punctato, basi supra scutellum breviter erecte hirta; elytris brevissimis indistincte lineato-punctatis, interstitiis multipunctatis, a medio abrupte truncatis, declivitate ad latera et infra acute carinata-marginata, subconvexa, striato-punctata, interstitiis planis, pilis brevibus cum setis nonnullis longis tenuibus commixtis. Long. 4·5 millim.

*Fem.* Short, robust, very convex, somewhat shining, bright-reddish testaceous, the elytra ferruginous, darker posteriorly; pubescence sparse, fulvous. Head very large, globose, alutaceous, front more

shining towards the mouth, with scattered rather large punctures; mouth infusate, thinly fringed; eyes oblong, scarcely sinuate anteriorly. Prothorax ample, broader than long, strongly convex, the sides slightly, the apex more strongly rounded, the latter with two prominent median blackish tubercles; surface before the transverse dorsal elevation with large transverse asperities, closer towards the middle, behind, punctured rather closely and distinctly at the sides, obsoletely over the middle, which is furnished before the scutellum with a dense tuft of short upstanding hairs, remaining pubescence scanty. Scutellum minute, rounded, infusate. Elytra strongly declivous and retuse from before the middle to the apex, about a third longer than the prothorax, separately rounded and finely bordered at the base, the sides slightly tending to diverge behind, the apical borders seen from above abruptly inflexed, and forming an obtuse angle at the suture; surface convex from the base to the declivity with indistinct rows of feeble punctures, the flat interstices with finer scattered irregular punctures; declivity subabruptly rounded above into the cylindrical portion, margined at the sides and apex with an acute ridge, separated from the fundus by a slight gutter-like impression, fundus gently convex with subimpressed rows of shallow punctures carrying long fine hairs, interstices flat with close fine piliferous points, their hairs short and semi-accumbent. Underside and legs testaceous, the tibiae closely and finely serrate.

*Hab.* INDIA, Chittagong Hills.

This fine *Xyleborus* is most nearly allied to *X. solidus*, Eichh., among described species. From that Australian species it differs in its larger size and broader shape, in the greater prominence of the apical tubercles, the more evidently transverse asperities and finer punctuation of the middle posterior portion of the prothorax, in the very scanty punctuation of the basal portion of the elytra, and in the very acute marginal carina and the flat non-tuberculate interstices of the declivity.

It is possible that the examples are not quite mature, and that the colour may be sometimes blackish. It is always difficult to determine whether light-coloured Scolytids are immature or not.

*Xyleborus mancus*, sp. n.

♀. Cylindrica, castanea, elytris apice picescentibus, breviter pilosa; prothorace antice fortiter rotundato, lateribus postice vix



rotundatis, dorso medio transverse elevato, postice in medio dense subtiliter cribose punctato et breviter hirtio, linea media longitudinali subelevata; elytris prothorace longioribus, perindistincte lineato-punctatis, interstitiis irregulariter punctatis, apice oblique truncato-retuso, margine per totum acuto, subcirculari, fundo utrinque ad suturam gradatim elevato et medio subimpresso, haud omnino opaco, subirregulariter lineato-punctato, interstitiis haud perspicue punctatis. Long. 3·3 millim.

*Fem.* Closely allied to *X. amputatus*, Blandf. (Trans. Ent. Soc., Lond., 1894, p. 575). Rather larger and more robust. Front (concealed in the type of *X. amputatus*) convex, subopaque, rather closely and finely punctate with a short shining elevated longitudinal line above the middle of the shining blackish epistoma; eyes rather deeply emarginate. Sides of the prothorax nearly straight behind the middle, its surface as in *X. amputatus* but with the basal patch of piliferous punctures more conspicuous. Elytra much darker apically, nearly black, the fundus of the apical retuse surface distinctly less opaque (in *X. amputatus* it has not the slightest gloss), not concave on each side but gradually raised towards the suture, with a somewhat irregular surface, due to a slight impression on each side, the rows of punctures somewhat wavy, the punctures rather large, shallow subnitid impressions (in *X. amputatus* the rows are perfectly straight and the punctures are small and not shining), interstitial punctures not perceptible (evident in *X. amputatus*).

*Hab.* CEYLON (*E. E. Green*).

This species, though really distinct from *X. amputatus* upon comparison, is so far alike that I was unable to separate it by means of my former description, and was obliged to have recourse to my type of the latter species, which Mr. Lewis kindly lent me for the purpose of comparison.

*Xyleborus discolor*, sp. n.

♀. Forma *X. brevis*, Eichh., proxima, sed multo minor, elytris brevioribus, colore distincta. Curta, cylindrica, laete testacea; elytris nigris abrupte truncatis, truncatura circulari, breviter fulvopilosa. Long. 1·8 millim.

*Fem.* Allied to *X. brevis*, Eichh., but much smaller. Short, cylindrical, bright testaceous, with the elytra black. Head dull, the front rather finely punctate, with a fine raised median longitudinal line; mouth infusate; eyes deeply emarginate. Prothorax as long as broad, the sides nearly straight behind, gradually rounded to the apex in an ellipse; discal elevation post-median, indistinct;

surface in front with small granular elevations, behind subopaque, very finely punctured, closely towards the middle, which bears a brush of short erect fulvous hairs. Scutellum small, rounded triangular, black shining. Elytra about as long as the prothorax, cylindrical, abruptly truncate behind the middle, shining black, finely punctate, the punctures of the rows and interstices scarcely separable from each other; terminal surface strongly declivous, circular, defined above but not margined, the lateral and inferior margin not acute, covered with very short fulvous pubescence and hence subopaque, finely striate, the interstices quite flat. Under-side and legs bright-testaceous, the anterior tibiæ narrow.

*Hab.* CEYLON (*E. E. Green*).

This little species is one of the best marked of the group of small forms to which it belongs. The bright testaceous colour of the body, black elytra, and fulvous, downy pubescence of their sharply curtailed extremities render it unmistakable even at a glance.